

REMARKS

Claims 1, 3, 4 and 5 are now in the application.

The subject matter of claim 2 has been incorporated in claim 1. Claim 2 has been withdrawn. In addition claims 1 and 4 have been amended to point out more clearly the distinguishing features of the invention over the Guzzella and Steffen references.

The attorneys for the applicants attempted to conduct a telephone interview with the Examiner, however, it was not possible to arrange an interview.

The applicants wish to point out that a particularly significant feature of the claims is that the motor control electronics in combination with the sensor connected within and to the housing and to the motor control electronics provide control of the electric motor and when the possibility of an excessively high twisting of the housing is detected via the motor control electronics, an actively rapidly braking of the motor is effected. As a result of the braking action when the rpm of the clutch is not attained the clutch serves for the termination of the transmission of forces. Note the applicants application at page 3, lines 6 to 13.

Claims 1-3 and 4 and 5 have been rejected under 35 U.S.C. 103(a) as unpatentable over Guzzella (5,884,619) in view of Steffen (6,123,158).

GUZZELLA – 5,584,679

The Guzzella patent discloses a method of and arrangement for preventing accidents during operation of a manually-operated machine tool with a rotatable toolbit.

In Guzzella there are a sensor or sensors within or machine tool, however, there is no mention of the sensor/sensors connected to the housing of the tool. The sensor/sensors signals are transmitted through an input interface to an electronic evaluation unit. If a potential accident is detected, signals are transmitted to a coupling which interrupts the drive path of the drive motor and the tool. Note Guzzella, column 3, line 48 to column 4, line 65.

In Guzzella there is no indication that the sensor/sensors are connected to the tool housing, they appear to be spaced from the housing:

There is nothing in Guzzella to suggest an actively rapidly braking of the motor. If the motor is not braked, there is the likelihood that with the stoppage of the current flow to the motor, the tool will continue to rotate without the braking action as taught by the applicants.

The applicants point out that a rapid active braking of the motor is opposite to a passive switch off of a motor because an active braking uses brake energy in

addition to normal friction energy loss. Accordingly, Guzzella does not afford any suggestion of the apparatus or method as presently set forth.

The question is then presented what does Steffen add to the teaching of Guzzella.

STEFFEN 6,123,158

The Steffen patent is directed to an electric tool with ducted cooled control electronics.

Steffen is relied upon as teaching a magnetic reluctance unit and a motor free of a collector and slip ring.

Steffen does not disclose a sensor and a microcontroller connected to the tool housing for an actively rapidly braking of the motor. Further, this reference does not disclose or suggest an rpm-dependent clutch. In Steffen between the motor and the crank mechanism there is a teaching to avoid overheating of components supplying drive energy for the motor. Steffen teaches cooling of the electronics not an arrangement for avoiding damage to the electric tool.

The combination of Guzzella and Steffen does not afford any basis teaching the combination for rapidly braking the motor and severing the transmission of driving forces.

Therefore, it is respectfully submitted that the claims, as amended, are allowable and such allowance is solicited.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail and addressed to: **Mail Stop AF**, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 3, 2004.

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